# HEALTH

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# WOMEN'S WELFARE

In the building up of a nation, women have to play a considerable part. If many nations in the West have taken rapid strides, it is not a little due to the prominent part the women took in that work. India lags considerably behind other nations in every respect, and the position of women in this country is, to say the least, really pitiable. Steeped in ignorance and bound by longstanding customs and traditions, they are groping in the dark, unaware of the part they have to play in the emancipation of our country. They are ignorant of even the elementary rules of hygiene and child up-bringing, that the future citizens of the country are not brought up on sound lines. True it is that thanks to the efforts of Women's Organisations, they have begun to realise their rights, duties and responsibilities. But such awareness is confined to the educated few, and the majority of women are still following the beaten track. The work that the Department of Women's Welfare in Madras, has done and is doing was referred to by the Premier, Shri P.S. Kumaraswami Rajah, at the Press Conference he held the other day in Madras, and the note that was then circulated gives in full detail the various activities of the Department. But the outer fringe of the problem alone has been touched so far, the activities of the Department being confined mainly to large urban areas. While Madras State can feel proud that it was the first in the whole country to come forward to implement one of the most cherished programmes of Mahatma Gandhi—working for the welfare of women and children—it cannot rest on its oars. It has to be up and doing and that too on a very large scale

if it is also to be the first State in the country that has given effect to Mahatma Gandhi's cherished ideal. Teaching of cottage industries to those who have come under the care of the Department and making them fit to earn their living after the completion of the course of training, the establishment of Service Homes for the deserted wives, widows and destitutes for each region, the admission of their children also in these homes so as to give them training and enable them to have a fair start in life, and so on and so forth, are but a drop in the ocean compared to the work that has to be done. The first essential need is the provision for the education of girls. It has been laid down as one of the Directive Principles of State policy that "the State shall endeavour, within a period of ten years from the commencement of this Constitution, for free and compulsory education for all children until they complete the age of fourteen years". Looking at the snail's pace at which progress is made one has to fear that the State Governments would try to use the word "endeavour" as a loophole for not giving full effect to the policy laid down. While the education of boys is necessary, equally necessary is the education of girls who are to be the mothers of the future citizens of this great country which has had a glorious past and which can yet attain its past eminence if proper and effective steps are taken. The education of girls, the inculcation to them of the knowledge of the elementary principles of hygiene and child up-bringing, would go a very great way to the production of a virile race of sturdy men and women who can hold their own against others. And such an education will help considerably to reduce the expenses of the Government in the field of public health and preventive medicine. Devoted as we are to the promotion of public health, we feel that top priority should be given to this all-important matter. Carefully drawn plans for the development of the country will become practically a dead letter unless positive health is assured to the people. And that positive health can be assured the people only if women a properly and well educated. W would therefore appeal to t Governments with all the strengt we can command to give thi vital-problem of problem their immediate and urgent consideration.

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## *High-Frequency Sound Waves Tested for Detecting Brain Diseases*

Scientists at the Massachusetts Institute of Technology at Cambridge, Massachusetts, are experimenting to detect diseases of the brain by the use of sound waves that are far above the auditory range of human beings.

The scientists have set a standard for the loss of sound when a beam is passed through a normal brain at a particular angle. By sending a sound wave through a diseased brain, the presence of an abnormal growth can be quickly determined by any variation from the standard.

Using sound waves to locate abnormal tissue growths in the brain would be far simpler than the present X-ray method. Before a tumour can be located by X-rays, the ventricles or brain cavities of the patient must be fitted with air, a complicated and uncomfortable process.

Research is now under way to determine the limits of safety in using high-frequency sound waves on human beings, so that there will be no damage to the brain.

# What are X-Rays

## *And How Do They Benefit Us?*

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### (Peer Into Your Inside)

Rao Saheb T.N.S. RAGHAVACHARI,
Retired Public Health Bacteriologist,
St. Thomas Mount, Madras-16.

IN my last talk, dear reader, I related the fascinating story of the 'Stethoscope', which is one of the two principal instruments that aid in the diagnosis of diseases. The other is the X-ray. The year 1895 saw the birth of two great discoveries in the field of electrical research. One of these was destined to assume enormous importance in the social and commercial fields of human endeavour. This was Marconi's (wireless) Radio and the other was Roentgen's discovery of the X-rays on the 8th November 1895. This latter event occurred in a darkened room in the Department of Physics of the University of Wurzberg in Germany, a quiet antiquated town on the river Main.

Radio waves.—Most people are familiar with the vast strides which the Radio, the wireless and the television have made in the 56 years that have intervened. From intimate association they have become quite familiar and common place. But the same cannot be said of the X-rays. The majority of people find them somewhat strange and even astonishing. But in reality there is nothing more strange or astonishing about X-rays than there is about the radio waves. The applications of X-rays have been limited largely to hospitals, clinics, and the doctors' consulting rooms and so the great benefits derived from the application of the X-rays are not widely known or readily appreciated.

Roentgen rays.—In December 1895, during the Christmas vacation, Rœntgen wrote out a preliminary communication called "*On a new kind of ray*". This communication contained the results of seven weeks of sustained, intensive research; the investigation was prompted by an observation which Rœntgen had made earlier in his laboratory. He found that by passing an electrical discharge through a particular kind of vacuum tube, he could generate a light that would pass through objects, opaque to ordinary light such as wood, paper and human muscles. These new rays though invisible, affected photographic plates and films. He was able to get shadow pictures of the inner structures of solid objects, with the aid of these invisible rays. He actually took a photograph of the bones in his own hand.

In this report he said among other things: "I have photographed many shadow pictures, which have a particular charm. I possess, for instance, photographs of the shadow of the bones of the hand; the

shadow of a wire wrapped on a wooden spool; of a set of metal weights enclosed in a box; of a piece of metal whose lack of homogeneity becomes noticeable by the X-rays etc".

Popular fallacies and misconceptions.—Before he made his formal report of the momentous discovery to the Wurzberg Scientific Society late in January 1896, the secret of his discovery had leaked out. On January 6th a Vienna newspaper published an account of it and this was promptly copied by other papers in Europe. On 9th January 1896, the discovery was cabled from London throughout the whole world. The term X-ray which was given to it by Roentgen himself, became widely circulated and has remained in popular use ever since. The amazing discovery caught the popular fancy of the moment. Soon exaggerated tales were told of them and badly garbled versions were printed in the cheap newssheets. These led to much misunderstanding of the true nature of the X-rays. Readers gathered the idea that the new rays could be used anywhere and at anytime by everybody. Some newspapers stated that these rays would make feminine modesty a thing of the past, unless X-ray proof clothing were forthcoming!! Certain timorous ladies were greatly shocked at the grave and weird possibilities thus presented by newspapers. In February 1896 an enterprising English cloth merchant advertised the sale of X-ray proof clothing and a Bill was introduced in the State legislature of New Jersey (U.S.A.) to prohibit the use of X-rays in opera-glasses at theatres. Whether this proposal originated in the modesty of the actresses, or was intended to preserve the morals of the spectators, is more than I can tell!!

X-rays as aids to the doctor.—The medical profession, however, was quick to realise the great benefits that the new discovery was capable of conferring on humanity. Here, the physician saw a way to make visible, things formerly hidden in the body; something to replace, with actual visual aids, the former guesses and wild surmises based solely on signs and symptoms. When a needle or other foreign body like a lead shot or bullet entered the body and got lodged somewhere, it was not possible before the advent of the X-rays, to locate its presence and adopt quick remedial measures. The simple procedure of photographing the body with the X-rays now serves to give instantly and painlessly all necessary information the doctor wants. Broken bones are quickly and accurately detected with full details of the extent and nature of the fracture. Fractures of the skull are impossible to detect without an X-ray examination. Early detection of fractures is often imperative, if life is to be saved after the injury. In modern surgical practice, doctors, for the sake of the safety of the patients, get an X-ray examination made promptly after every head injury. Methods have now been developed by which the doctors of today can examine and inspect every part of the body: the lungs, the heart, the gall bladder, the stomach, the intestines, the

urinary and generative tracts, the nasal and other sinuses, the brain and even the child in the mother's womb. Before the discovery and the wider application of the X-rays, the doctor could not tell that disease was present until obvious illness or physical disability manifested itself.

Advances in treatment.—But now, as a result of X-ray examinations, the doctor of today can detect disease and other abnormal conditions before they have given rise to actual illness or outward symptoms. This extended application of the use of the X-rays in diagnosis, has changed the character of medical practice. Formerly the doctor was called in to examine and treat those who were definitely and visibly ill. But now people who are apparently healthy also undergo medical examination with the aid of the X-rays, with the object of detecting incipient or latent disease in its earliest stages. Having an X-ray examination, so far as the patient is concerned, is simple, harmless and painless. It is, however somewhat expensive and is not yet as cheap as it should or might be; but in view of the enormous advantage and long range economy that would accrue from a prompt X-ray examination of vulnerable organs, the extra expense cannot be considered by any means excessive or uncalled for.

The X-rays have, therefore, been used for diagnosis of disease in its early stages and numerous cases of tuberculosis of the lungs, and cancer of various organs are being brought to light, with the result that by the prompt remedial measures adopted, thousands of lives are being saved, which in the pre-X-ray days would undoubtedly have perished.

X-rays as therapeutic and diagnostic agents.—In the treatment and control of various malignant conditions, such as cancer, Hodgkin's disease, etc., deep X-ray therapy has proved to be of great value. Several other modifications and minor rays have also been discovered and used (*e.g.*, ultra-violet, infra-red and Grensen's rays) in the treatment of various ailments which had baffled the methods of medical treatment in vogue prior to the advent of these new rays.

Formerly, in the early days of X-ray diagnosis and therapy, long and tedious exposures had to be given which were trying to the patients. Efficient tubes have since been developed along new principles of construction and powerful transformers have been built to supply electricity at very high voltages. Screens have been invented to intensify the action of the X-rays. With modern equipment, radiography of any part of the body, even the skull, is accomplished in a fraction of a second with considerable precision and certainty. The latest pieces of X-ray apparatus used in therapeutic treatment have, likewise, been also greatly improved in design and quickness of action; they also ensure accuracy, precision and efficiency. Radiology is now an inseparable ally of surgery. It has become an indispensable aid in almost every branch of medicine. In dentistry, it helps to detect abscesses of the teeth, infections in the jaw bone, and cavities in the inter-proximal surfaces

of the teeth. It shows fractured bones and foreign bodies in the flesh, the abnormalities of the digestive, respiratory and urinary tracts, and the location of tumours and cancers. In midwifery (*obstetrics*) it enables the doctor to ascertain the size of the pelvis of expectant mothers and thus obviate certain dangers of child birth. In internal medicine, Radiology has enabled accurate diagnosis to be made in rickets, pneumonia and tuberculosis.

Personal hygiene and preventive medicine.—Medical science offers no measures for curing cancer or consumption or serious diseases of the heart, blood vessels and the kidneys if they remain undetected until well advanced. But it does have the means of *controlling* and *arresting* the progress of these diseases in many cases *if they are detected in the early stages.* These diseases, and for the matter of that, many others also, do not show any obvious symptoms in the early stages. The blood vessels may become hardened, the heart damaged, cancer developed and advanced to its last stages, the kidneys seriously impaired, and consumption far advanced before serious disability or discomfort is felt by the sufferers from these maladies. Consequently it is only by measures deliberately designed to detect them, that they can be found in their early and controllable stages. It is to this end that personal preventive medicine is to be applied. Personal preventive medicine aims, therefore, at controlling diseases that cannot be reached or eradicated by the general sanitary and hygienic measures of the Public Health and Sanitary Authorities of the State or the Civic Bodies. The most essential thing in personal preventive medicine is the periodic physical examination (the Annual Health Audit to which I have frequently referred in my previous articles) in which the functions and the state of the vital organs are checked up by the family doctor. In this check-up the X-rays play a very important role.

The doctor should not be called in, *after* the disease has made its presence known by pain or disability. Every one should bear constantly in mind that it is far simpler to prevent suffering and disease than it is to relieve it. It is likewise far easier to prolong life by *preventing* disease than attempting to save life, by *treating* disease. You can add years of health by co-operating with your family doctor and getting a thorough check-up (health audit) every year of yourself and of every one of the members of your family.

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## *Penalty for Obesity*

"Suicide by Overeating" might be the appropriate verdict in the death of Ernest Bevin, Britain's famous foreign secretary. He died at seventy, a month after retiring from office. Through the years, the press often commented on his huge bulk. He suffered from heart trouble, high blood pressure and hardening of the arteries. No doubt his physician told him many times that he was endangering his health and life by overeating, but like so many others he was unable to control his appetite and his country lost his valuable services.—*Good Health (U.S.A.).*

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# RADICAL CURE OF ILL-HEALTH

KESHAVLAL H. PAREKH, M.B., B.S.,
Dhoraji.

We see to-day that the whole human race is practically afflicted with some sort of illness, profound or negligible. Nobody likes the disease, nobody wants it; and yet most of us have it. Practically all diseases have their remedies and cures, although a number of diseases, neglected or overlooked in early stages, prove incurable. So, in spite of the so-called cures at hand, humanity is still found to be suffering from various ailments.

In order to grasp clearly the ideas relevant to the diseases, we shall have to study various anatomical tissues of the body and their governors, the thought and the mind.

Human body consists of bones, muscles, digestive organs, the blood connective tissue, nerve tissue, and skin.

Bones have their specific diseases like osteitis, joint troubles, caries and injuries. Most of the bone diseases are dependent on blood conditions, resulting in infections, inflammation, or wasting of the tissue. Injuries are due to external causes but as they could have been avoided if mind and thought were properly functioning they can be regarded as arising from abnormal functions of the tissue concerned.

Muscles have their own diseases like myositis, rheumatism, convulsion, tetanus, etc. They are generally due to abnormal condition of the blood, created by injuries, strain, or malnutrition. As malnutrition can be corrected or avoided by careful attention, and injuries also by careful attention, the mind and the thought come uppermost, in bringing about the cure of that tissue. Indifference or wrong use of the mind and the thought are responsible for the ailments, only the correct use of the mind and the thought, *i.e.*, vigilance is fundamentally important in maintaining the health, as well as curing any and almost every disease.

Digestive organs help to maintain life, energy and work. We consume food through them and transform it into nutrition and energy. The unwanted portion is judiciously cast off by them. Generally the stomach accustoms to digest any article of diet, available from the environments, *viz.*, flesh, liver, corns, greens, etc. In famine and illness, people are known to live upon quite foreign things to which their stomach was never accustomed before. But we do not always eat with genuine appetite, or to the needs of the body. We eat merely, then, for the relish or taste of the tongue, and the so ingested portion of the diet becomes the surchargeable portion of the diet on its ticket

value, and we have to pay doubly for it once for being ill, and again to the doctor for being corrected. So we shall see that careful attention to the diet in the form of well adjusted mind and thought, helps to keep us safe from falling victims to the errors of dieting.

Blood contains nutrition of the body. The circulatory system provides nourishment to all the tissues of the body and also carries away waste products of the body to be discharged by the relevant organs of the body. Anæmia is due to want of supplying nutritive material to the blood by the organs concerned or due to infective, or toxic material in the blood, which destroys the existing nutrition. These are physical defects in the body, and can be corrected by due attention to diet and habits. But above this all is the reign of thought and mind. An unhappy thought or painful or rapturous condition of mind greatly impedes or accelerates the flow of blood, which gives rise to the phenomenon of shock or high blood pressure. This is the root evil of the present generation believing in industrial science or materialism, neglecting the Creator, standing behind our visionary world. Of course, heat and cold and many accidental vital and tragic incidences met with frequently in daily life, produce such conditions, but they are less permanent and detrimental. But the vivacious pursuit in and after scientific acquisition of material gains, implants a pernicious habit in the human thought centre and I believe it is the chief and primary cause of the so-called malignant and incurable diseases of the various organs.

Skin and connective tissue are mainly the organs of defence. They protect us from heat and cold, shocks of various kinds, injuries and diseases by its mechanical nature first, and then by dilating and contracting the blood supply of the region. Here again while the internal supply of healthy blood plays a great role in the maintenance of healthy condition, mind and thought play no less an important part in maintaining the defence of these tissues, as well as the whole body.

Lastly the nervous system, while all the organs of the body, including the nervous system, maintain the health and well-being of the body by way of nutrition to the tissues and discharge of waste products through the appropriate excretory organs, all acting harmoniously, the thought and mind govern these functions completely, and their perversion is responsible for the growing illness of the present world.

If a man's bone is broken, and he is suffering from giddiness of the brain, it will not do to simply treat his bone and let him go. He will again break his bone.

So most people are suffering from dyspeptic troubles, due to their devoting out-of-proportion-energy to their business, or some kind of work or play. We cannot morally treat them with dyspeptic mixtures, and allow them to behave as they will.

Typhoid and other dietetic infections of the body depend largely on the morbid appetite of the laity to grab things, because they are flavoured or tasty.

What municipalities and medical profession are doing to prevent these diseases, is not successful, because they either lack full knowledge or their efforts are half-hearted or perhaps both.

So, while it is quite necessary to prohibit wrong habits, wrong food and their wrong use, to prevent diseases, by mechanical means or laws, it is yet far more important to train thought and mind to be useful in day-to-day functions.

Medical profession is largely if not mainly to blame. This profession is seldom calculated to make money or flourish on human ailments. When we open a health centre, we sincerely wish that human illnesses will diminish if not eradicated but to our surprise with the increase of qualified medical practitioners and scientific investigations of effective remedies, human ailments have kept growing pace to pace. So there must be something wrong, either with the medical profession, or with the people generally.

I shall blame both. People generally are in the hunt for money. Their mind and thought have been eccentric; they do not know why they want money by means fair or foul. Really they do not want money to meet their necessities, but they run after it because the other man possesses more. This hunt after money makes us overlook our health, social relations, and spiritual balm. Medical profession generally exploits this perversion of human nature, and so directly or indirectly helps to maintain this human perversion.

We realize to our pain that stringent laws of government have merely produced bribery, black-marketting and various social crimes. We cannot, in effect, pass or frame laws to guide men to behave morally. It is the real teaching of religion only that will guide us to real happiness in life, and salvation after, if any. Let us be wise and moral, so that we can save the money, energy, and human peace, by learning to know and maintain health, and utilise them for the betterment of the world at large. To be concise, "Speak the Truth and Practise the Right."

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### *Plague—Modern Therapy*

**Meyer recommends the following therapeutic treatment for plague as being the most effective. Streptomycin should be administered in large doses 4-g. to begin with and reduced on the 3rd or 4th day of recovery. Sulfa drugs may be given after the 5th day. Aureomycin, chloromycetin or terramycin (2 to 4. g) orally may be given in addition to 4-g. streptomycin, in severe septicæmia and in pneumonic plague. Cases which do not promptly respond in the first 2 days to streptomycin, should be deemed resistant to that antibiotic and given the other antibiotics *e.g.* terramycin, aureomycin, chloromycetin etc In places and on occasions where these antibiotics are not readily available sulphadiazine or sulphamerazine should be given. 4 grammes being the first dose, followed by 1 gramme every 4 hours for about 8 to 10 days, have been very effective in uncomplicated cases of bubonic plague. 2 to 3 grammes of sulphadiazine, or sulphamerazine, should be given prophylactically to every contact daily for 5 days and if any contact develops plague, the routine antibiotic treatment outlined above should be promptly instituted.—(Meyer, K. F. *Jour. Am. Med. Assoc., 144, 982, 1950*).**

# *Peaceful Home* (DOMESTIC DISTORTION AND PROPORTION)

Dr. K. M. HIRANANDANI,
L.C.P.S. (Bombay), L.M.R.L.A.H. (Dublin),
C R.X.I. (Baghdad),
Hyderabad, Sind.

HOME one must have—howsoever simple or palatial. Recent history has taught us that middle class-people should have simple homes. The luxuries of life, in home furnishing or adornment, should be portable and palatable, so that in the vicissitudes of life, one should be able to carry easily and not feel sorry, having to sell or to part with them.

The life's object should be to—earn to live, live to labour, labour to save, save to make a home, and save for times of need and the old age, and pay off the obligations.

Wife is a very necessary accompaniment in the home. She must mind the "kitchen etc" and the necessary household requirements. For her husband, she must make wholesome, healthy, invigorating food, which should bring forth healthy children. Her endeavour in the early years of married life should be, to bear children, who will be her companions, and a memory. A husband is as anxious for a battalion of children, as the wife is for her charms, novelties, etc. Even an old man should have a wife companion.

Wife's association should be according to the like of her husband's, and the husband's according to the wife's and their status and position.

Greed, money and jealousy should be avoided, contentment in life, should be the ideal. Food adulteration must be avoided and guarded.

Servants should be trained to be reliable and clean. Female servants for the females particularly should be provided.

Neighbourhood you must mind, and allow no familiarity, and you must authenticate reliability. Outside you must errand on shops of decency. Anything you happen to notice wrong outside, speak of it at home and among your relatives and friends. Be quiet on other's personal affairs and not comment on them. Have few select friends.

Up to the age of adolescence and after, in the career of profession, you must mind the drifts of life and not waste yourself. Keep up your age as fresh as you can. Avoid all kinds of stimulations in youth. Sexual perversions, aversions and eversions must be avoided in married life. They are not health-giving and appetisers, but produce a temperament of abhorence. Family jealousies exist and human incompatibility is not uncommon. One's privacy is necessary. Frank, quiet talk on personal matters is more sanguine, than pulse corollary. Sexual performance woman should try to accommodate to the best of her ability. Avoid mental stasis and pelvic stasis by keeping W.C. clear regularly.

Keep the police informed of public wrongs, indecency, insults or assaults. Always seek "Divine" guidance. Sex analysis is a mystery of magic.

# Civilisation and High Blood Pressure

**Dr. SYED SALIMULLAH HUSAINY,**
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We are living in ultra modern times and we are a civilised race. We think modern civilisàtion has brought home many comforts and added much to the interest and variety of our life. It has no doubt lengthened pleasures and minimised dangers, trampled upon diseases and distress by its various inventions and marvellous discoveries but a common man never reconciles with the peace and pleasures the modern civilisation has wrought. To him,the peace and pleasures that are seen prevailing are no peace at all. They are only the quietude of the grave. The present civilisation is a curse and scourge on him.

Let us throw some luminous light over modern civilisation and see its bright and dark aspects with a view to guage how far the common man is true.

I think modern civilisation has done us no harm. There is nothing to find fault with it or to blame it but in the zeal for keeping abreast with the march of civilisation we are treading on wrong path and trespassing the limit of decencies. Hence, our miserable plight. With the dawn of civilisation we are seen gradually passing from spirit to matter. Religion and God are myths to us. God is an idea and ideal to us. We are drifting from peace to anarchy. Everywhere things are heading to a crisis.

Scientists have no doubt made great strides in the domain of science and wrought things which would appear like miracles to all, but of what use their inventions and discoveries. The average span of life is much shorter than that of our ancestors. Diseases, discomforts, poverty, misery, discontentment and dissatisfaction are writ large, deep rooted and growing fast and furious. Contentment is the keynote for happiness, but we have no peace of mind at all. Mammon is the greatest enemy of man. Our mania is for more. In its search we sacrifice all which are near and dear to us at the altar of our health.

Worries, anxieties, anger, want, unnecessary brooding, unlimited desires, mundane inclinations, physical desires, temptations, ignoble thoughts, luxury, venery, hurry and scurry in life all upset equipoise of mind and are the contributory factors of 'High blood pressure', a hidden disease of modern civilisation.

He who eats to live is a saint and he who lives to eat is a sinner, runs the adage.

Food we eat to keep ourselves alive. It is ingested, digested and after mixing with various juices

of the gastro-intestinal tract turns the form of blood. Through circulatory apparatus it nourishes the whole body, The circulatory apparatus and the human body may be compared to a well, its pump, supply channel, field and its crop.

The water from the well has to be drawn and pumped out by means of a pump to the outlying field containing crop through the supply channel. In the process of irrigation, the well, its pump, water, supply channel, field all have to play their part to ensure a good crop. If the water is bad, the pump is weak or the supply channel is narrow or obstructed, the crop cannot receive its nourishment, it fails to yield.

What holds good to the process of irrigation equally holds good to the circulatory apparatus in the human body.

The heart pumps out or propels its blood which passes through arteries to the tissues for nourishment. Nourishment of the tissues is interfered with if the heart is weak or the lumen of the arteries is narrow or blocked. Peripheral resistance or tension arises in the passage of blood flow if the lumen of the arteries is narrow. This leads to high blood pressure.

Normal blood pressure.—*Systolic* :—At the age of 20 years, the systolic pressure is 120 mm. of Hg., up to 60 years—120 + $^1/_5$ of the age. At 60 years it is 135, upto 80 add one mm. Hg., and after 80 years it tends to fall.

*Diastolic* :—At the age of 20 years the diastolic pressure is 80 mm. Hg. ; for each five years above 20 years upto 60 years add one mm. Hg. ; for each five years above 60 years upto 80 years of age add 2 mm. Hg. After 80 it tends to fall.

*Pulse pressure* :—The difference in mm. of Hg. between systolic and diastolic is called pulse pressure. The systolic, the diastolic and pulse pressure always maintain a ratio of 3 : 2 : 1 (120–80–40).

*Aetiology of high blood pressure* :—Heredity.—In some families blood vessels have narrow lumen which gives peripheral resistance to the blood circulation. Overstrain, hurry and scurry in modern life, anxieties, worries, toxins, septic focus, lead, tobacco, gout, indigestion, defective protein metabolism, allergy, over-eating, overindulgence in alcohol, venery, want of anterior pituitary hormone, diabetes, aortic and mitral valvular disease, exophthalmic goitre, adherent pericarditis, hypertension, vascular spasm, arteriosclerosis, narrowing of aorta, intracranial hæmorrhage, cerebral tumour, increased viscosity, polycythæmia, drinking too much, shocks, luxury, anxiety, increased activity of pituitary, thyroid and suprarenal bodies, constipation, urinary diseases, etc., lead to thickening and hardening of the arterial coats which leads to loss of elasticity and contractility of arteries.

*Aetiology of low blood pressure* :—Diseases of suprarenal capsules, syncop, fainting attacks, influenza, diphtheria, plague, coronary thrombosis, typhoid, pneumonia, epidemic dropsy, cancer, dehydration, vomiting, purging, cholera, dysentery, sweating, food poisoning algid malaria, kalaazar, anæmia.

*Clinical* :—Headache, increased dyspnoea, change in temperament, irritability, emotional outbursts, throbbing and heaviness of head, both frontal and occipital, insomnia, flushing flashes of light before eyes, breathlessness, transient blindness, palpitation, impaired memory, epistaxis, depression of body and mind, paresis of limbs, agony, sounds in the ear, exhaustion on slight exertion, thickened radial arteries, hypertrophy of the left ventricle.

The radial artery in a normal man when felt is not hard and shows good volume and tension but in this disease it is hard and tortuous and is like a chord and can be rolled between two fingers.

TREATMENT.–Take rest, open bowels, avoid over-exertion, mental strain, over-feeding. Adopt quiet and regular life, eliminate toxin and waste matters from the blood and bowels, take light physical exercise, avoid cold bath, abstain from nitrogenous foods, tea and alcohol, venesection, usefully change temperament, avoid sedentary occupation, deficit oxygenation of blood, constipation, anxiety, luxury, venery. Purgatives lower arterial tension. Confection of water melon is of much use in H.B.P. Much reliance cannot be placed on medicine but one has to adopt precautionary measures.

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## *Adrenal Complaints : New Chemical to Replace Surgery*

A new chemical compound may eliminate the need of surgery to remove the adrenal glands in persons suffering from adrenal tumors or high blood pressure. These glands are located on the kidneys and secrete hormones that have an important role in body function.

Named Amphenone B, the new compound was announced recently by three doctors of the National Institutes of Health, near Washington. They reported successful use of it in laboratory animal experiments. The compound was developed in the Institutes' Laboratories by Dr. Milton J. Allen, one of the doctors.

The compound acts by increasing the size of the adrenal glands. This enlargement is accompanied by a reduction in the amount of hormones produced by the glands. Thus the compound may be used instead of surgery to treat persons suffering from overactivity of the adrenal glands.

The action of the new compound apparently is achieved by a stimulation of the pituitary gland at the base of the brain, say the Institutes' doctors. If this gland has been removed, they found that the compound did not produce the enlargement of the adrenal glands and decrease the amount of their hormones.

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This is the true joy in life, the being used for a purpose recognized by yourself as a mighty one; the being thoroughly worn-out before you are thrown on the scrap heap; the being a force of Nature instead of a feverish, selfish, little clod of ailments and grievances, complaining that the world will not devote itself to make you happy.—*George Bernard Shaw.*

**MANAGEMENT OF THE**

# EPILEPTICS: By Relatives and Friends

(T. N. S. R.)

Sir Charles Symonds, the renowned British expert on nervous diseases, gives very useful and valuable advice in the course of a special article in the *British Medical Journal* for 4—11—1950 on the management of epileptic patients. Though the article is intended primarily for the medical practitioner, very useful and practical suggestions are given for the guidance of patients and relatives who have charge of the patients. The more important of these we summarise below for the benefit of the readers of the *Health* :—

Epilepsy commonly begins in childhood or early adolescence, so that the diagnosis has to be given and explained to the relatives rather than to the patient, and the success or failure of any treatment will largely depend on the extent of their co-operation. The relatives should be told that the occurrence of an epileptic attack means that there is a liability to further attacks—a liability which depends on some innate or constitutional defect in the brain, that cannot, so far as we know, be eradicated.

*Regime for the patient* :—It is important that the epileptic patient should as far as possible lead a normal life, but there are a few general rules to be mentioned :—

Attacks may be precipitated by hypoglycæmia—(condition produced by a low level of glucose in the blood). Therefore the patient should not go long without food. If he is to be exposed to such risk (as for instance on a long journey) he should carry sweets or chocolate with him to fill the gap. Extreme hydration is another known precipitant (of epileptic fits). The drinking of an abnormally large amount of water or other fluids at any one time, should be scrupulously avoided by epileptic patients. (They should take only small amounts of water at intervals). Attacks are liable to occur after a sleepless night, or night short of sleep. So if the patient has a late night he should get up late in the morning. Excessive physical fatigue may sometimes lead to an attack and should be avoided. This does not mean he should not take part in any games or in normal exercises; only he should not over exert himself when untrained.

*Education* :—Recent controlled electro-cephalographic (studies of the size and form of the head by means of special X-ray apparatus) studies have clearly shown that attacks are more apt to occur when the mind of the patient is vacant than when it is busy. Mental concentration (such as studying books and being engaged in some artistic or other mental pursuits) is therefore very good, (*not at all bad*) for the epileptic. His education should proceed normally. In view of his handicap, it is even more important for him than the

ordinary person to advance his knowledge.

*Avoidance of accidents* :—The risk of making the patient feel different from others must be weighed against that of accidents. The epileptic cannot of course hold a driving licence. If liable to attacks during the day, he should not ride a cycle on crowded roads. He should not swim unless accompanied by some one who knows his disability and can take care of him. He should not go into a crowded swimming bath. No other restrictions are necessary unless he is subject to exceptionally frequent attacks.

*Diet* :—Apart from the ketogenic diet—which is now seldom used in the treatment of epilepsy, there is no evidence that any dietetic restriction whatever has any influence on the disease.

*Choice of occupation:*—The occupation of the epileptic must be so planned that it will not involve driving a car, or any other activity which involves special risk.

*Marriage and parenthood* :—An epileptic should not marry unless the prospective partner has been given by the doctor a full explanation of the nature and possible course of the illness, at a strictly private interview with the patient's written consent. The risk of transmission to offspring is serious only if there is an inherited tendency on both sides.

*Treatment* :—Three drugs are at present in use which are considered to be of specific value :—

Phenobarbitone; Epanutin and Tredione. These are powerful drugs and poisonous if wrongly administered as regards the particular condition or dosage; so they can be taken only on the advice of a competent and qualified doctor.

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## LEG EXERCISE

A simple exercise that strengthens the leg muscles of athletes with knee injuries or those of bed-ridden patients was described in Galveston, Texas, recently before the Texas State Medical Association by Dr. Rex. Howard of Fort Worth, Texas.

The Delorme technique, as it is called, was named after the American officer who developed it during World War II. His method required the systematic exercise of four thigh muscles—the quadriceps—that control the action of the knee.

The quadriceps, the officer found, are strengthened more quickly by limited heavy exercise of the leg than by frequent but lighter activity. He devised a weight-lifting system which can provide this heavier exercise.

When a patient seeks medical treatment, his doctor first finds out the maximum weight he can lift with his foot. The patient then begins his exercise by lifting light weights, progressing later to heavier ones. He is warned that too much exercise fatigues the muscles and may aggravate his condition.

By taking the Delorme exercise before participating in a game, an athlete can tell whether or not his quadriceps are strong enough to hold the injured knee in place. The Delorme exercise also rapidly restores leg strength to other patients who find walking difficult after being confined to bed for several weeks.

# HALITOSIS (Bad Breath) AND ITS TREATMENT

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**Introduction.**—Halitosis is commonly known as foul, fetid, offensive or bad breath. The term halitosis is derived from the Latin halitus (breath) and the Greek suffix osis, indicating primarily an increase in volume either in physiologic or pathologic. In the publication of "Natural-History" by Pliny there is a statement "Man's breath becomes infected by the bad quality of food, by the bad state of the teeth and still more by old age." Normal breath has a very faint odour resembling blooming chestnuts; while the healthy mouth should be free from any odor. At one time or other during life, one suffers from malodors but it is for a short period and immediately corrected by Nature. Presence of offensive breath does not cause any pain or inconvenience; but it is certainly a disagreeable condition. In most cases its presence is partially or not at all recognised by the patient, while on the other hand, those who come in contact with him are actually conscious of it and are often disagreeably offended by.

*Physiology.*—Physiologists agree that the recognition of odors is brought about by a mild form of aerial stimulation of the "Olfactory" terminals of the fifth nerve distributed over the surfaces of the nostrils. Here we should remember that odors do not emanate from a given centre nor do they disperse in all directions as sound or light waves do. Olfaction is apparently produced by an infinitesmally small amount of substance. Olfaction can be recognised by vapors or gases only and not in the form of a solution. It is well known that olfactory organs in human beings are quickly and easily fatigued by continuous exposure to odorous materials. Persons whose occupations lead them to work with disagreeable odors become insensitive to these exhalations and it is generally recognized that invalids are not affected by malodors which may arise from their own bodies.

*Pathology* :—Pathologists mention the following causes of bad-breath :—

1. Purely dental conditions *i.e.*, the teeth, artificial dental substitutes and the gingival tissues.
2. Diseases of the soft structures of the oral cavity.
3. Diseases of the nasopharyngeal region.
4. Diseases of the digestive tract.
5. Diseases of the broncho-pulmonary area.
6. Diseases of the certain metabolic, febrile and genito-urinary system.
7. Presence of absorbed drugs or poison.

1. *Bad breath arising from purely dental conditions* :—It may be safely stated without fear of contradiction that more than 90% of all cases of offensive breath originate from prolonged stagnation of food debris about the teeth. The foul odor is brought about by fermentation, *i.e.* the breaking down of retained food remnants by minute organisms, the bacteria. Carbohydrate debris is primarily productive of the various highly odorous fatty acid compounds like diacetic, lactic and propionic acid. Albumen and protein debris are the parent substances of ill smelling ammoniacal compounds, specially the high offensive hydrogen sulphide. Food debris readily clings to all of the surfaces of the teeth by adhering to the ever present mucoid plagues. As a result, the free margin of the gingival tissue is more or less always to be found in a state of mild chronic inflammation. Moreover overhanging fillings, artificial dental substitutes or the injudicious use of tooth-pick or the tooth-brush are some of the frequent causes which, bring about diseased conditions, which in turn, give rise to mald. If an exposed gangrenous pulp happens to be present, it will materially add to the quota of foul odors. In advance cases of general pyorrhœa, the patient frequently complains of a bad taste in the mouth on awakening in the morning, accompanied by a characteristic offensive odor. The

organic material lodged on artificial dental substitutes (if not kept clean) readily undergoes fermentation and peculiar "false teeth smell" is frequently recognized by those who come in the close range of the wearer of an unclean artificial denture.

2. *Bad breath arising from the diseases of the soft structures of the oral cavity* :—All suppurative types of gingivitis, stomatitis or other forms of ulceration in the oral cavity are productive of foul odors. The blood clot which forms after the extraction of a tooth becomes infected and consequently productive of a foul odor. A heavy dry tongue coated with a thick greenish brown fur is usually accompanied by offensive breath.

3. *Bad breath arising from disease of the nasopharyngeal region* :—Chronic laryngitis, pharyngitis and the various types of tonsillar infections are most common causes of halitosis. Adenoids which are always associated with mouth-breathing, chronic infection of the maxillary sinus and congestion of the nose arising from a deviated septum etc., etc. invariably produce offensive odors from the mouth and the nose. Sometimes odor from the mouth and the nose are combined. Here Frankel has suggested that a piece of thin card board be placed over the nostrils which will exclude the air passing through the nose when smelling the breath from the mouth at close range.

4. *Bad breath arising from the digestive tract* :—The causes of offensive breath as mentioned in older medical text-books are usually referred to as originating most frequently (next to an unclean mouth) from the gastro-intestinal canal. This concept is quite erroneous, because air from the stomach or from the intestines cannot pass through the collapsed esophague under normal conditions except in belching. As a proof of this assertion it may be stated that the simple closure of the moist lips, which measure only a few millimeters hermatically seals the mouth to the expired air. Furthermore, if a gelatine capsule is filled with finely chopped onion and swallowed, no odor can be detected from the mouth; while the smell of the raw onion may be observed as many as ten hours after it has been eaten. Certain diseases of the esophagus such as strictures, the formation of a cul-de-sac and its dilatation, or the late stages of cancerous ulceration of this organ or the stomach, are productive of pronounced foul odors.

5. *Bad breath arising from the broncho-pulmonary diseases* :—Among the diseases of the bronchi and the lungs, chronic fetid bronchitis is marked by an intense foul odor of the exhaled air, while in putrid bronchitis the sputum is the principal carrying medium of the fetid odor. At times, a foul odor resembling decayed meat is associated with the gangrene of the lung, with pulmonary abscesses and with pulmonary tuberculosis.

6. *Bad breath arising from certain metabolic infections, febrile and genito-urinary diseases* :—One of the earliest outstanding symptoms of diabetes mellitus is a typical fruity odor from the oral cavity, often referred to "Diabetic breath." Chronic suppurative gingivitis and dryness of the mouth which favour the production of foul odors are frequently additional easy symptoms of diabetes. Scurvy, leucæmia purpura and similar diseases of the blood which manifest themselves by definite symptoms in the oral cavity *i.e.* by hæmorrhage and ulceration, are always accompanied by pronounced foul odors. An offensive breath (resembling a smell of a decomposing blood), more or less characteristic of the disease, is, according to Rolleston, found in cirrhosis of liver. During menstruation, the expired air at times exhibits a definite offensive odor somewhat resembling onions which immediately ceases at the expiration of the period. Virtually, all febrile conditions produce putrid odors from retained foul debris, cast off epithelial cells and stagnant saliva plus the increased activity of pathogenic organism. In some cases of influenza, a general stomatitis with more or less deep irregular ulcerations of the tongue, accompanied by a pronounced feter from the mouth is at times observed. It is claimed by Stone that a day or two after the onset of yellow fever and occasionally even a few days before the manifestation of its typical symptoms, peculiar putrid odor is noticed in the expired air of the patient.

Prolonged speaking, hunger or psychic excitement frequently cause temporary

halitosis, suppression of the flow of urine, cystitis or certain types of chronic diseases of the kidneys which may be the cause of uraemia are responsible for an ammoniacal odor in the expired air of the patient; moreover, marked chronic constipation may at times give rise to a fecal odor of the breath.

7. *Bad breath arising from the presence of absorbed drugs and poisons* :—Arsenical compounds, bismuth preparations, salversan and arsphenamine produce definite garlic-like odors in the expired air. Chronic lead poisoning causes a peculiar sweetish metallic odor from the oral cavity which has given rise to the synonym "lead breath," a condition known centuries ago as "Halitus Saturnius." Temporary impregnation of the expired air is always definitely observed after poisoning with phenol, lysol, laudanium and other drug compounds. Severe burns characterised by "Carbonization" of muscle tissue are at times productive of an odor from the expired air resembling that of carbon disulphide.

8. *Bad breath arising from foods, condiments and stimulants* :—Protein substances like cheese and cooked eggs when left about the teeth in the form of debris are ready sources of hydrogen sulphide formation. The odor from fresh onions may remain from ten to twelve hours; while cooked onions give off a less persistent odor, because the odorous principle has been partially destroyed by heat. Garlic seems to possess the most persistent residual odor of any substance used as a condiment. In an adentulous mouth the odor of the garlic or the onion is less persistent; the smooth mucous membrane does not absorb the essential oil of these spices in the same manner as the crevices and deposits about the filthy or decaying teeth. Other spices such as cloves, cinnamon, ginger, etc., etc. impart odors to the breath for a relatively short time only. Of the various stimulants, alcohol in the form of Whisky or Wine impregnates the breath for a prolonged period of time. Alcohol beverages are readily recognized by their characteristic odors. The odor arising from the use of tobacco places this universally employed stimulant next in order of food debris as a cause of halitosis. In an unclean mouth which is frequently present in the habitual tobacco user, the stale odor remains for many hours (incidentally also about the fingers and in the clothing) since the tarry deposited about the teeth embody the odorous principle, *i.e.*, nicotine, pyridin, ammonia, etc. Opium as used by the habitual smoker causes a persistent musty odor of the breath.

*Prophylactic measures and treatment* :—Since malodors arising from the mouth are merely symptoms of some local or general disturbance, it is but natural that before treatment is undertaken, their cause, if possible, should be ascertained. As pointed out, it is safe to assume that the origin of the odor may be looked for in the mouth proper in over 90% of cases. Prophylactic care of the oral cavity by the dentist, combined by intelligent cooperation by the patient with paste or powder, the brush and an antiseptic mouth-wash will eliminate the offensive odor in the majority of cases. If a heavily coated tongue is present the tongue scraper should never be used. In case of malodors arising from putrefactive products located between the deep mulci of a grooved tongue, Boss recommends the following treatment: about twenty drops of a 2% solution of vanillin in diluted alcohol (50%) are added to about one ounce of warm water, the tooth-brush is dipped in this solution and passed over the tongue surface in a downward direction. This treatment is applied twice a day until the symptoms are relieved. If a diseased condition is present in the mouth, proper care by the dentist and the physician is essential. Wounds and ulcers require frequent use of an antiseptic (deodorizing) solution. If the odor arises from any of the various general diseases as discussed above, the medical or dental practitioner may be able to suggest the necessary remedy for the elimination and the prevention of its return The disagreeable odor arising from the administration of an organic arsenical compound or from some other source may be covered up by sucking a peppermint lozange. Occasionally a hysterical woman may complain of imaginary odors arising from her mouth *i.e.*, parosmia. On the other haud a genuine case of dementia praecox, or hamicrania, etc., may be responsible for a definite odor.

In rare cases however it may be found

*that all efforts to locate the cause of* halitosis are futile. Tigerstedt cites two such cases. The odor arose from nasopharynx which had resisted all types of treatment. He recommended the smoking of cigarettes which were lightly impregnated with a solution of one part of thymol in six parts of alcohol with the smoke blown through the nose. The offensive smell was thereby completely masked for several hours.

In addition to the above suggestions, general hygienic care by the patient, plenty of sleep, fresh air and frequent bathing, together with well-balanced diet, may serve as beneficial adjuncts in obtaining results, as desired.—*Indian Dental Review.*

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## *Addition of Vitamin $B_1$ to Rice Diet Reduces Beriberi*

VITAMIN $B_1$, added to rice, would annually save the lives of thousands of persons in countries where rice is the principal food, according to Robert R. Williams, an American chemist. The first scientist to synthetize Vitamin $B_1$, he declares, that vitamin enriched rice can be prepared at the cost of 35 cents per person a year.

During a recent trip to the major rice-producing countries of Asia, Dr. Williams discussed with their governments a programme of enriching rice. This, he says, would help eliminate beriberi, a disease caused by lack of Vitamin $B_1$ in the diet. Beriberi now causes a particularly high death rate among infants.

The first large scale use of enriched rice was started in the Bataan area of the Philippine Republic in 1948. As of April 1, 1951, not a beriberi death had been reported from the area, which before 1948 had one of the higest beriberi mortality rates in the world.

The Philippine legislature is now considering buying mechanical mixers so the 5,500 rice mills in the country may add vitamin $B_1$ to the rice. If this is done, states Dr. Williams, beriberi will become an "all-but- forgotten" scourge in the Philippine Islands.

[The incidence of beriberi is equally great in large parts of India which are rice-consuming areas. The problem of finding adequate quantites of rice for the consumption of the people in their areas is causing considerable headache to the powers that be, that they are resorting to the dubious. course of reducing even the very poor rice content of the ration when the stocks in hand go down. It is a matter for extreme regret that while some countries in the West which are depending entirely or almost on foreign imports to meet the food requirements of the people have been managing the situation by the exercise of foresight. India which has, according to official estimates, only a deficit of less than 10% of her actual requirements finds herself in deep waters due to lack of sufficient fore thought and planning. While thus the basic problem of the supply of the absolute minimum food requirements of the people still remains unsolved, it is next to impossible to expect our governments to take steps to enrich rice with vitamin $B_1$ as suggested by Dr. Williams. And so long as attention is not devoted to this matter, the incidence of beriberi will continue as heretofore, taking away a large number of lives. But the problem cannnot be allowed to be neglected for long, and we would suggest to the Governments to turn their attention to this all-important problem at an early date. The way has been shown to India, and wise statesmanship requires that speedy action should be taken in the matter.—EDS.]

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"Moral indignation is jealousy with a halo."—*H. G. Wells.*

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"Worry is a thin stream of fear trickling through the mind; if encouraged, it cuts a channel into which all other thoughts are drained."—*A. S. Roche.*

3 0 MAY 1955
MADRAS

### Some Rules of

# HYGIENE AS LAID DOWN BY ANCIENT PHYSICIANS OF INDIA

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EVER since the advent of the British Rule in India, we have been hypnotised by the glamour of the Western civilization. We have imbibed a few of their good but many of their bad habits. Some habits, perfectly suitable for a cold country like England, become meaningless or even harmful when adopted thoughtlessly in a tropical country like ours.

With the regaining of the political independence, we shall also shake off the mental slavishness and turn once more with pride to our ancient customs, based on an accurate and intimate knowledge of the country and the people for whom they were framed.

In this article I shall take up only such customs that have a direct bearing on the health of an individual. Ancient India realised that soil is more important than seed and hence laid a good deal of stress on positive health. Ayurveda, in an elementary form, was one of the compulsory subjects taught in the schools. Therefore these rules of hygiene were known to every one and the more important ones actually attained the status of religious customs and were regularly and universally practised. Sushruta, Charaka and Vagbhatta, some of the most famous Ayurvedachaaryaas have laid down, in no uncertain terms, rules to regulate every aspect of one's daily routine, taking into account the seasonal variations and individual idiosyncrasies. But here are only a few rules applicable to every one.

"Even at the risk of giving up everything else, yow should protect your body: for if your body does not exist everything that exists in non-existent to you".

"For the protection of health and life, wake up at "*Brahma-Muhurtha*" *i.e.*, at about 48 minutes before sun rise."

From this, we may infer that people started their work at sun-rise or immediately after, and one is asked to rise up early so as to go through the necessary ablutions carefully and leisurely. They, no doubt, retired for rest during the hot mid-day. We would do well to go back to this routine in all schools and as many offices as possible.

"Morning and evening, the teeth must be cleaned without hurting the gums with an astringent, pungent or a bitter twig which is chewed at one end into a tuft"

No wonder, the Indians were once famed for their excellent teeth. But now the tooth brushes have helped to bring pyrrhœa and caries to almost every house in India. Good deal of attention has to be paid to keep a tooth brush free of germs and probably not 1% of the users do this. Tooth pastes may be good substitutes for the natural medicinal juices present in the twigs but a tooth brush, however well fashioned, can never clean each individual tooth and interspace as thoroughly and gently as a tooth stick can. Ayurveda also provides excellent powders for polishing teeth. So, rather than import tooth brushes and tooth pastes or even encourage their manufacture in the country, the Independent India would do well to find ways and means of making tooth sticks easily available for every one.

"The tongue should be scraped with a silver or a gold scraper or a fine soft twig split longitudinally and about 10 inches long".

"The man who cleanses his mouth with oil (sesame or til) will be free of tooth ache. He will relish even very sour things, can bite any food be it ever so hard. His throat will never be parched nor is there any fear of the lips getting chopped. His teeth will not be affected by caries and the gums will be strong." This is something altogether new to most of us and the application of oil to mouth sounds rather unpleasant but the benefit

it promised is so good that the whole treatment seems well worth a trial.

"The mouth should be cleaned by gargling with cold water four, eight, twelve, or sixteen times after urination, defaecation eating and brushing the teeth respectively".

It is because they recognised the value of gargling as a preventive against infections that this custom was observed with scrupulous regularity. But alas ! the present day table manners and present day bustle of life, have almost banished this good habit.

"You should apply the cool and pleasant '*Surma*' *(Collyrium)* to both eyes daily. Once in five days or at least in eight days "*Rasanjan*" must be applied in order to induce free watering of the eyes. It must, however, be applied only at night as the eyes must not be exposed to the rays of the Sun immediately afterwards."

The "*Surma*" (*Collyrium*) is still in vogue among both sexes of the older generation and among the rural people of Bharat. Their eyes have a beautiful lustre and their eyesight too is better than that of non-users.

## Physical Culture

" Strength is the foundation of health: hence promote it by all the means at your command."

" Just as a lion is not approached by minor animals, so also a gymnast is not approached by disease."

"Enemies are afraid of approaching one who practises physical culture regularly. Old age does not encroach on such a man easily."

" If a man performs physical exercises regularly, even unwholesome, over cooked or under cooked food gets digested."

What a correct estimate of the value of physical culture ? And yet it was not practised indiscriminately as is done now in the schools in the form of drill at all times of the day. They knew that—

" Age, strength, constitution, country, time, season, diet must determine the amount of physical culture or else the result will be disease."

" After the exercise, the whole body must be massaged firmly and yet soothingly."

Abhyangam, *i.e.*, a bath preceded by a massage with oil was a daily ritual.

" It checks old age, removes fatigue and body aches. The sight improves and the body gains weight. Sound sleep is induced and the complexion improves. The body gains in strength and in short the life is prolonged."

" You must apply oil more profusely to the head ears and feet." And yet the modern people not only shun oil, but even remove the nature's protective oils by soaps. In olden days, they used gentle cleaners such as fine powders of pulses, special earths, or the leaves or fruit which contain a frothy alkaloid when a stronger cleanser was required. All this is because we aped the Westerner whose moisture and climate did not require the use of oils. Besides improving the complexion and circulation of the skin the daily massage has a definite beneficial effect on the body metabolism. It is certain that this simple process of putting a few drops of oil in the ear regularly, will reduce the number of cases of ear aches, as it helps the elimination of wax and at the same time prevents infections. Here is a common Tamil proverb—

" Pay your oil man and save your Doctor's bills."

## Bath

" A bath in a river is the best, a bath in a lake is middling, a bath in a well (a small pond) is ordinary while a bath in a limited amount of water as by pouring water with a lota is useless."

An immersion of the whole body in cold water for any length of time is no doubt invaluable in a tropical country like ours. Hence, for the sake of those who were unable to bath in river regularly, certain sacred days were fixed when it was obligatory for every one to bath in rivers and sea. Bathing tanks and ponds were a prominent feature of many a private dwelling.

" Very dirty is the body with its nine out-lets which throw out waste products throughout night and day ; it must be cleaned by a morning bath daily."

This rule was so rigorously enforced that even a child would never dream of having its first meal of the day without having a bath. The manual labourers were however allowed to have their bath

at the end of the day, when their days toils were over.

"Bathing the head with hot water is not good for the eyes. Cold water on the head is good for eyes." Let the Indians please take note on this.

### Food

"The use of suitable food is the only means of promotion of health, use of unsuitable food causes disease."

Every one of the articles of diet is described carefully in Ayurvedic books and classified under one or other of the following headings, according to its effect on the body tissues as augmenter of *Vata*, *Pitta* or *Kapha*, or according to its effect on ones Character as *Saatwik*, *Raajasik*, or *Taamasik*.

It is interesting to note that they knew the special value of meat as a tissue builder and energy sustainer and that the flesh of chicken and some other birds was prescribed for increasing fertility. This explains why only *Kshathriyas* and *Shudraas*, the two castes where a man-power is all important, were allowed to be non-vegetarians. Here is the model diet prescribed for all:

"Grain that ripens in 60 - days, red rice, green gram, rock salt *aamlaki* (emblic myrobalan), barley, pure rain water, milk, ghee, meat of animals that live in forests, honey and green vegetables."

Milk, *aamla* and ghee were given a very high place in diet. The first two were classed among *Jivaneeyas* or life-giving substances. In modern language we acknowledge them as being rich in vitamins.

Interesting to note too is the fact that milk known to be the best of foods was eschewed like poison in acute fevers though permissible in chronic fevers.

"Time, season, mode of preparation, country, in relation to where it is grown and where it is used, constitution, state of health at the moment, must determine the suitability or not of an article of a diet."

Full details are given regarding diet to be taken in each of the six "ritus" or seasons of India.

"Never take food within one *yama* (3 hrs) of the last meal. This produces indigestion. Do not allow an interval of more than two *yamas*."

"Eat suitable food, eat moderately, and eat at proper time. Always control your *Indrias*."

The depth of the knowledge of dietetics both in health and in disease possessed by the older generation even to this day is truly astounding. Equally deplorable is the ignorance of the modern people. The remedy lies not in broadcasting dietetics worked by Westerners for their country but in reviving Ayurveda, the Medical Science of the country. This article touches the barest outlines and is intended just to suit the curiosity of the modern doctors and stimulate thought. Even a cursory study of the ancient science will dispel their prejudices and shall give useful information.

The Public Health officers, the custodians of nation's health, would do well to bear in mind that old customs must be proved to be harmful before they are given up for new ones. In fact, research may be instituted into hygiene according to Ayurveda and in consultation with famous *Ayurvedaacharyaas* it may be possible to publish text books, suitable for use in schools.—*Journal of Ayurveda.*

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## *New Cure for Alcoholism*

A new drug being manufactured by a British firm is claimed to provide an effective treatment for chronic alcoholism.

The drug has the outstanding merit that it enables the patient to build up resistance to the drinking habit without recourse to will power. This effect is produced quite simply: the drug sensitises the patient in such a way that alcohol in quite small doses produces a discomfort so intense that once experienced it deters the majority of users from further attempts to take alcohol as long as they are using the drug

The drug is chemically known as *tetraethylthiuram disulphide* and is marked under the trade name of "Cronetal" It is for administration only under medical supervision in a hospital and is intended to be used in conjunction with psychological and social therapy. "Cronetal" was exhibited at the British Industries Fair in London from April 30 to May 11.—***Indian Journal of Pharmacy.***

# Effective Therapy for Polio Victims

An Egyptian mummy entombed 5,000 years ago and excavated some time back was found to be crippled in exactly the same manner as many victims of poliomyelitis today. In ancient Greece Hippocrates, the "father of modern medicine", wrote about an epidemic on the island of Thasos that had all the characteristics of a polio outbreak. In its present form, the disease has been recognised since the early part of the nineteenth century.

Although it has been in existence for 5,000 years, poliomyelitis still remains one of the most dreaded and baffling diseases. Scientists still do not know what exactly can be done to stop the spread of polio. But they do know how to treat it effectively.

In the United States today, 75 per cent of those who contract the disease recover so well that they have no post-polio problems. Excellent methods of therapy enable a majority of the crippled to lead fairly normal lines.

Research scientists, meanwhile, are carrying on a never-ending search for measures of prevention. The National Foundation for Infantile Paralysis—established by the late President Roosevelt, probably the World's most famous polio victim, supports research in 70 different institutions in the United States. The Foundation has a branch in every county of the United States.

A three-year old research to identify all the viruses that cause polio is being financed by the Foundation and will be completed late this year. Present scientific knowledge indicates that there are at least three different types of viruses. There may be more. Each virus produces a different type of immunity, or resistance to the disease when the patient recovers. Many adults are undoubtedly immune to two or more types of polio viruses because during their lives they have had the disease several times in such mild forms that they were unaware of it. Scientists are therefore finding out how many viruses produce polio and what their characteristics are before they can perfect a vaccine for general use.

Apart from encouraging research there are several ways in which the Foundation helps polio victims. If a case is detected away from home, his nearest of kin are informed immediately and parents or relatives are flown to the patient by a special plane. Trained experts watch the patient night and day. If removal to another hospital is necessary this is also done by air. Once back at his home, the patient is regularly visited by a physical therapist sent by the National Foundation.

In the beginning the Foundation pays all the expenses of the treatment by specialists, the plane trips and hospital changes. Speed is so important in treatment that no questions are ever asked about the family's financial status. Later the Foundation does enquire whether the family can make some contribution to the medical costs. Even if they cannot, the patient receives exactly the same treatment, the very best available equipment and care from trained therapists. This is true even if the treatment must be continued for several years, and if as many as 10 or 12 specialists are needed.

A neurologist may be called in to examine the nerves and muscles to find which ones are involved in the paralysis. An orthopædic surgeon may be called in to fit needed braces. Then there are the physical therapists. One type of physical therapist is needed during the early stages for what is called "passive" therapy—that is, massaging the muscles to get rid of stiffness. During a later stage, another therapist will carry out "active" therapy. This may include swimming lessons for a patient who is still partially crippled.

At a still later stage occupational therapy comes in teaching the patient new skills that will help to keep up his morals and at the same time provide exercise for affected muscles.

The main support of the National Foundation comes from the March of Dimes—millions of coins from the pockets of ordinary people. And what really motivates this institution is the "good neighbour" spirit. "Good neigh-

bour" gestures in the polio-fighting campaign are reported every day, pilots fly planes, often as volunteers, without pay. There are 20,000 or more women who serve as hospital volunteer aides. There also have been cases of entire communities rallying to lend help to polio families.

One of the many services performed by the National Foundation is to tell parents what to do in a polio emergency. It is known that polio is transmitted mainly from person to person. So parents are advised to take extra precautions about sanitation within the home During a polio outbreak children should be kept away from crowds, because many people carry the polio germ without knowing it. In fact, most people have a natural immunity to polio. And scientists have estimated that for every diagnosed case, about 10,000 other persons are infected without knowing it.

Poliomyelitis used to be called "infantile paralysis" because the vast majority of cases occur in those younger than fifteen. There is actually no age limit—some people in their seventies have come down with the dieease.

The advance symptoms of polio could indicate any one of a dozen illnesses. They are headache, fever, sore throat, upset stomach ; or a stiff neck or trouble in breathing or swallowing. A child with such symptoms should be put to bed at once—just in case. Because if it is polio, quick action may prevent crippling.

The disease always develops rapidly. Within a matter of hours, paralysis may follow what started out as a simple headache.

Polio does not always cause paralysis, however. Those who are paralysed in the beginning may recover completely. Strangely enough, people of robust health may be left severely crippled, while others who have been considered frail may have no aftereffects.

## *The Versatility of A C T H*

A CONFERENCE on ACTH was held in Chicago at the end of December 1950; striking evidence was given about the efficacy of ACTH in connection with the treatment of *Burns*. A typical case was described which involved a three year old boy with 50% of his body covered by third degree burns. The boy was delirious and had been irrational with high fever 103°F. to 106°F., for five days at a stretch at the end of which ACTH was administered to reduce the fever within a few hours and eliminate the excruciating pain. This was duly achieved and there was no doubt that this hormone was responsible for the relief ; for the symptoms returned when ACTH was withheld. It was continued with the result that it promoted also the growth of the grafted skin, vital for the treatment of severe burns.

A group of research workers from the Cornell University reported on the striking effect produced by the hormone ACTH in stimulating the growth of premature babies. There was a remarkable increase in the vigour as evidenced by the strength of their crying and they developed voracious appetites.

It was also reported that a single injection of ACTH rapidly and completely counteracted the poison of the black widowspider and the deadly copperhead snake. (*Discovery*, Feb. 1951, pp. 66–67.)

[*Note* :—There is thus a strong case for the hormone being tried for the bites of the venomous snakes of India : the Cobra, the Russels Viper, the Krait, and the Echis carmata ; also for scorpion and other bites].—T.N.S.R.

"There are three kinds of lies ;—lies ; damned lies, and statistics"—*Benjamin Disraeli.*

* * * *

"I believe in getting into hot water ; it keeps you clean.—*G. K. Chesterton.*

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# Topics from Medical and Health Periodicals

**Air travel safe for heart patients.**—Air travel is safe for most persons suffering from heart ailments, an American physician reports. Dr. Robert L. Levy of Columbia University in this City says that commercial air planes do not fly high enough to cause heart strain, except in patients with the most serious heart conditions.

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**Hospital at home.**—If you live in a community which is many miles from a hospital, perhaps you can get some tips from the "Good Neighbour Club" Ratcliffe, Texas, U.S A. Four Ratcliff women formed a club in 1946 to provide emergency hospital service for their isolated town which is 20 miles from the nearest doctor

Unable to raise funds to build or equip a hospital of their own the "Good Neighbour Club" members did the next best thing; they bought a hospital bed, thermometers, syringes and a sterilizer and other equipment on a very modest scale from the funds of the Club. Now, in an hour any room in Ratcliff can be transformed into a hospital room. The 56 members of the Club are organized in teams and working in shifts, provide 24 hour nursing whenever needed, administer medicine under the doctor's orders, carefully prepare the patient's diet and attend to all other matters calculated to provide comfort to the patient. They even keep the patient's house in order and feed other members of the family. Money needed for the equipment and other services is raised from square dances, suppers, quilting bees, fish fry, and a carnival.

Caring for the sick is only one of the problems any town faces and the G. N Club has answers for some of the other problems also. Members reserve some of their canned provisions to help less fortunate families over the rough spots They sew for hospitals and small children and keep a supply of clothing on hand for emergencies.—(From the *Readers' Digest*, Feb. 1951).

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**Nutrition research.**—A very great advance in the science of nutrition will be made against diabetes, hardening of the arteries, overweight and heart failure, says an American Nutritionist Dr. Charles Glen King, Scientific Director of the Nutrition Foundation, a private research organisation, expressed this view in New York City recently before a meeting of the American Chemical Society

Dr. King credited the research and education programmes of American food industries with the progress made in eliminating dietary diseases. He added, however, that many unsolved problems remain and said the scientist in food and nutrition research faces "unlimited opportunities and unlimited difficulties."

Among discoveries still desired are the identification of the essential nutrients in foods that come from animals, such as liver, meat, eggs and milk Scientists are convinced, he added, that at least two, and possibly four or five new vitamins, are still to be found in them.

Dr. King also reported that scientists have an increasing understanding of the interdependence of nutrients in foods For example, two recently discovered B vitamins, folic acid and vitamin $B_{12}$, have been found to function closely with vitamin C They are also closely linked in nutrition with choline, with iron, copper, cobalt and with protein foods, he said.

Studies have shown that choline, an organic chemical substance, is valuable in treating high blood pressure and hardening of the arteries. Animals with ailments similar to these diseases are said to have benefited from taking choline, Dr King explained

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**Hiatus hernia.**—Simmons *et al* report on a series of 25 cases of hiatus hernia. They use the term hiatus hernia to the type of œsophageal hiatus hernia seen in adults as a result of a *sliding herniation of the stomach into* the thoracic cavity. The most characteristic symptoms were:—epigastric or substernal pain after meals, fulness, gas and distress, aggravated by reclining; often comes on only at night and is relieved at least partially by getting up and walking about, regurgitation or vomiting not associated with nausea; hæmatemesis, melena and anæmia, alone or in combination Hiatus hernia may present no symptoms and require no treatment; those due to mechanical nature of the hernia are best treated medically The patient should be advised to avoid coarse rough foods; to chew his food well and eat slowly; to avoid eating large meals; to eat more frequent smaller meals required to maintain nutrition; and to stay upright for atleast one or two hours after each meal. Food should not be taken at bed time. Distress at night may be relieved by elevating the head of the bed to an angle of 30 degrees Antacid and sedative drugs are often useful

Acute symptoms due to hiatus hernia may stimulate acute coronary heart disease Chronic symptoms may simulate chronic heart disease. Peptic ulcer in the stomach or duodenum may be associated with hiatus hernia; a malignant neoplasm may develop in or near the herniated portion of the stomach and produce symptoms and signs similar to those of hiatus hernia alone Trauma, such as coughing or straining, may produce it Fluoroscopy and rœntgenography of the stomach should always include a search for hiatus hernia. This necessitates examination with the patient in the supine position with head down, at some time during fluoroscopy.

—(*Arch. Int. Med.* 86, 2, 253-65).

# What Will You Do In An Emergency?

Supposing you saw your brother, a friend or even a stranger knocked down by a motor car, bitten by a snake or enveloped in a fire, will you be able to save him by rendering first aid or will you be one of those who just stand and look on helplessly? Immediate assistance has been known to have saved many lives and this is exactly what Dr. U. Rama Rau's book on First Aid teaches you in a simple and easy way.

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